

**818 INDUSTRY MEETING  
MAY 1&2, 1995**

| INITIAL   | NAME                                  | COMPANY                 | STREET ADDRESS         | ROOM      | CITY                   | PHONE        | FAX                |
|-----------|---------------------------------------|-------------------------|------------------------|-----------|------------------------|--------------|--------------------|
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| _____     | OWENS David                           | LA Cellular             | 17785 Center Crt Dr No | _____     | Cerritos CA 90701      | 310-403-8553 | 310-403-1970 (FAX) |
| _____     | PAGE Steve                            | GTE                     | 800 N Haven            | Suite 200 | Ontario CA 91764       | 909-481-5281 | 909-989-3663 (FAX) |
| _____     | PARKS Russel                          | North American Paging   | 700 N Brand            | 9th Floor | Glendale CA 91203      | 714-564-8701 | 714-835-6032 (FAX) |
| _____     | PHILLIPS Laura                        | Dow Lohnes & Albertson  | 1255 23rd St NW        | Suite 500 | Washington DC 20037    | 202-857-2500 | 202-857-2900 (FAX) |
| _____     | POPE Pam                              | Pacific Bell            | 2600 Camino Ramon      | RM 4W700V | San Ramon CA 94583     | 510-867-8643 | 510-277-0253 (FAX) |
| _____     | POTTER Tom                            | Seiko Comm              | 1625 NW Amber Glen Ct  | Suite 140 | Beaverton OR 97006     | 501-531-1532 | 501-531-1700 (FAX) |
| <i>SV</i> | <i>Daryl Vonderpool</i><br>PUNN Jason | Southwest Page          | 400 Kelby St           | _____     | Fort Lee NJ 07024      | 201-947-5300 | 201-947-2177 (FAX) |
| _____     | PURCELL Bill                          | TCG-LA                  | _____                  | _____     | _____                  | 213-787-0007 | 213-787-0099 (FAX) |
| _____     | RADIGAN Julio                         | GTE Mobilnet, Inc.      | 4410 Rosewood Dr       | _____     | Pleasanton CA 94568    | 510-416-7642 | 510-224-8105 (FAX) |
| _____     | ROSEN Art                             | AirTouch Paging         | 2401 E Katella Avenue  | RM 150    | Anaheim CA 92806       | 714-938-2950 | 714-938-1436 (FAX) |
| <i>DS</i> | SILVESTRE Donna                       | CPUC                    | 8141 E 2nd             | #310      | Downey CA 90241-3645   | 310-869-0803 | 310-904-2168 (FAX) |
| _____     | SIMPSON Bill                          | US West Cellular        | _____                  | _____     | _____                  | 619-571-4110 | 619-571-4112 (FAX) |
| _____     | SKINNER Max                           | MCI Telecomm - West Div | 707 17th St            | Ste 4200  | Denver CO 80202        | 303-291-6536 | 303-291-6333 (FAX) |
| _____     | SOUKIASSIAN Harry                     | Hye Page                | 4549 W Rosecrans Ave   | _____     | Hawthorne CA 90250     | 310-644-1197 | 310-644-4332 (FAX) |
| _____     | SPITTLER Randy                        | Metrocall Paging        | _____                  | _____     | _____                  | 818-705-1936 | 818-705-1834 (FAX) |
| <i>JS</i> | STROSHANE Geneva                      | GTE California          | One GTE Place          | CA500VBD  | Thousand Oaks CA 91362 | 805-372-8052 | 805-372-7001 (FAX) |
| _____     | SWEET Tom                             | Pacific Bell            | _____                  | _____     | _____                  | 619-586-3994 | 619-549-2072 (FAX) |
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| _____     | TISHBE Moise    | Bell Paging        | 8631 W Pico Bl          | _____     | Los Angeles CA 90035   | 310-278-5558 | 310-278-4558 (FAX) |
| _____     | VENTURA John    | TCG-LA             | _____                   | _____     | _____                  | 213-787-0031 | 213-787-0099 (FAX) |
| _____     | WARREN Greg     | Pagenet of Ontario | 3401 Centre Lake Drive  | _____     | Ontario CA 91761       | 909-390-7243 | 909-984-7448 (FAX) |
| _____     | WENRICK Kathryn | PageMart           | 6688 N Central Exprsway | Suite 800 | Dallas TX 75206        | 214-706-3522 | 214-750-4593 (FAX) |
| <u>SW</u> | WHITE Sandy     | GTE                | One GTE Place           | CA500DG   | Thousand Oaks CA 91362 | 805-372-7693 | 805-373-8569 (FAX) |
| _____     | WILLIS Robert   | Pacific Bell       | 2600 Camino Ramon       | RM 3N000P | San Ramon CA 94583     | 510-823-7803 | 510-830-2763 (FAX) |
| _____     | YOUNG Toby      | Metrocall          | 18321 Ventura Bl        | #200      | Tarzane CA 91356       | 818-705-1936 | 818-705-1834 (FAX) |

1. No number changes.
2. Work out number assignment process.
3. Dial plan issues -- dialing disparities.
4. Higher percentage of new entrants will appear in new NPA.
5. Customer confusion.
6. Double trunking to end offices for Operator Services or E911.
7. Limit of 4 NPAs in E911 tandem (common to each type).
8. Maximize utilization of NPA codes vs a split (no imbalance).
9. Long term impacts of multiple NPAs unknown and potentially difficult.
10. Two NPAs are associated with the same geography.
11. May not require permissive and mandatory dialing periods.
12. Avoids the need for public and political involvement on boundary decisions.
13. Competitive implications for local exchange providers.
14. Customer (end user) irritation (dialing).
15. All numbers may not have the same perceived value.
16. May have inefficient uses of NXX codes -- may have spill-over effects.
17. Additional customer costs to obtain same number.
18. May create disadvantages for businesses assigned numbers in the new NPA.

1. Well understood implementation
2. Generally considered competitively neutral.
3. Requires number changes of approximately half of the population of the code.
4. Allows 7 digit dialing within a geographic area.
5. Geography changes.
6. Major coordination required.
7. Data base changes required.
8. Assures one NPA for each geographical location.
9. May create the desire to bring other (wireless) services into conformance with new area code.
10. Will (may) impact market identity.
11. NPAs become identified with geographic location.
12. Customer (end user) irritation (number change).
13. Minimizes customer confusion for customers outside the area.
14. Retains incentives for efficient use of NXX codes.
15. All numbers have the same perceived value.
16. Additional customer costs to obtain same number.

**Bellcore**

Bell Communications Research

**Bellcore Letter**

|   |  |   |
|---|--|---|
| Letter Number<br>IL-94/11-013   | Type<br>Informational                  | Date<br>11/16/94                            |
| Title<br>Issuance of Revised Central Office Code (NNX/NXX)<br>Assignment Guidelines and Forms |  | For Character Access Point Number<br>2W4011 |
| Number of Pages<br>None   | Number of Pages<br>NP062, NS001, SS002 |   |
| To<br>Recipients of North American Numbering Plan (NANP) Information                          |  |   |
| Letter Category<br>Unrestricted   |  |   |
| From<br>R. R. Conners, Director - North American Numbering Plan Administration (NANPA)        |  |   |

This IL is to inform the telecommunications industry of the approval by INC of new draft versions of the Central Office Code (NNX/NXX) Assignment Guidelines and associated application forms.

Letter Information (includes safety warning disclaimer (if applicable), ordering information, copyright information)

The Industry Numbering Committee (INC), a standing committee of the Industry Carriers Compatibility Forum, has recently approved the attached new versions of the Central Office Code (NNX/NXX) Assignment Guidelines and associated application forms (ICCF 93-0729-010), effective October 26, 1994. The new versions of the guidelines and forms have been approved by INC as draft versions, which still must go through the INC "final closure" process. The attached documents replace the July 14, 1993 version of the guidelines (IL-93/08-021) and the December 1, 1993 version of the application forms (IL-93/12-001).

At the time the guidelines and forms were approved, a one-year timetable for transition was established to develop experience with the guidelines and forms and to identify appropriate changes based on this experience. During the transition period, which has extended beyond the original year, numerous changes have been made by industry consensus; and the INC recommends the new guidelines and forms, although still drafts, be used when applying for CO Codes. INC has indicated that additional changes are anticipated within the coming months based on contributions currently under review, but did not want to delay use of the improved guidelines and forms.

Copies of this letter are being forwarded to achieve the widest possible industry distribution and may be reproduced for further distribution as needed. Questions or concerns related to the attached may be directed to Jim Deak on 201-740-4594, to the INC staff or to any of the CO Code Guidelines Workshop co-chairs listed on the guidelines coversheet.

R. R. Conners  
Director  
North American Numbering Plan Administration

# ICCF

Industry Carriers  
Compatibility Forum

ICCF 93-0729-010  
Page 1 of 22  
Draft Revision 10/26/94

Under the auspices of the  
Carrier Liaison Committee

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## CENTRAL OFFICE CODE (NNX/NXX) ASSIGNMENT GUIDELINES

### INDUSTRY NUMBERING COMMITTEE:

#### CO Code Guidelines Workshop

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Sponsored by the Alliance for  
Telecommunications Industry  
Solutions

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### APPENDICES A TO F

### CENTRAL OFFICE CODE (NNX/NXX) ASSIGNMENT REQUEST AND CONFIRMATION FORMS

This draft revision replaces the approved version dated 7/14/93  
but has not been approved for final closure

## 1.0 Purpose and Scope of This Document

This document specifies guidelines for the assignment of central office codes (also referred to as CO codes in this document). The term CO code or NNX/NXX refers to sub-NPA destination codes for addressing. Sub-NPA refers to digits D-E-F of a 10-digit World Zone 1 address, e.g., 740 is the CO code (NNX/NXX) in 201-740-1111. Examples of uses for CO codes (NNX/NXX) for which these guidelines apply include plain old telephone service (POTS), Centrex, Direct Inward Dialing (DID), cellular mobile service, pagers, data lines, facsimile, coin phones, and customer owned pay phones. While these guidelines were developed at the direction of the FCC,<sup>1</sup> they do not supersede controlling appropriate World Zone 1 governmental or regulatory principles, procedures and requirements. These industry consensus guidelines are expected to apply throughout World Zone 1 subject to procedures and constraints of the World Zone 1 administrations unless the affected administrations direct otherwise.

These guidelines apply only to the assignment of CO codes (NNX/NXX) within geographic numbering plan areas (NPAs). This does not preclude a future effort to address non-geographic NPAs in the same guidelines.<sup>2</sup> While the ultimate delivery of any call to a CO code (NNX/NXX) need not be geographically identified, by necessity initial routing is geographically defined. Therefore, for assignment and routing purposes, the CO code (NNX/NXX) is normally associated with a specific geographic location within an NPA, from which it is assigned. For some companies this is also used for billing purposes.

## 2.0 Assumptions and Constraints

The development of the assignment guidelines include the following assumptions and constraints.<sup>3</sup>

- 2.1 These guidelines are intended to apply before and after implementation of interchangeable NPAs (INPA) in January 1995.
- 2.2 NANP numbering resources shall be assigned to permit the most effective and efficient use of a finite numbering resource in order to prevent premature exhaust of the NANP and delay the need to develop and implement costly new numbering plans. Efficient resource management and code conservation are necessary due to the industry impacts of expanding the numbering resource (e.g., expansion from 10 to 11 digits). Impacts to the industry include:
  - Customer impacts (e.g., dialing, changes to advertising and stationery, etc.)
  - CPE modifications
  - Domestic and international switching hardware and software modifications
  - Operational support systems modifications
  - Reprogramming of non-telecommunications data bases that contain telephone numbers

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<sup>1</sup> This effort has been undertaken at the direction of the Federal Communications Commission (FCC), in a letter to NANPA dated June 21, 1991, in an attempt to develop guidelines that can be applied uniformly while using a finite numbering resources in the most efficient and effective manner possible.

<sup>2</sup> Separate guidelines apply to the assignment of NXX codes within currently assigned Service Access Codes (SACs), and others will be developed, as appropriate, as new SACs are assigned by NANPA. For example, NXX assignment guidelines for the 800 and 900 SACs are available. Separate guidelines also will be prepared to address the assignment of numbering resources reserved for non-geographic applications.

<sup>3</sup> At present, various procedures are employed to recover costs associated with the assignment and implementation of codes. The treatment of these or any future costs associated with CO code assignments is not addressed in these guidelines.

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- 2.3 These guidelines treat the assignment of central office codes (NNX/XXX), including submission of new assignments for inclusion in the Routing Data Base System (RDBS)<sup>4</sup>, Bellcore Rating Administrative Database System (BRADS) and LIDB Access Support System (LASS) so that notification to the industry can take place through RDBS outputs. Examples of these outputs are the Local Exchange Routing Guide (LERG) and the NPA/XXX Activity Guide (NNAG), BRADS outputs such as the Terminating Point Master (TPM) and the NPA/XXX Vertical and Horizontal Coordinates Data (VHCD), and LASS outputs such as the LIDB Access Routing Guide (LARG). Implementation of these assignments is beyond the scope of these guidelines.
- 2.4 The applicant must be licensed or certified to operate in the area, if required, and must demonstrate that all applicable regulatory authority required to provide the service for which the central office code is required has been obtained.
- 2.5 The guidelines should provide the greatest latitude in the provision of telecommunications services while effectively managing a finite resource.
- 2.6 These assignment guidelines may not apply to an environment where number portability exists. If and when number portability within an NPA becomes an issue, a set of guidelines may be required.
- 2.7 These guidelines do not address the issue of who will fulfill the role of Code Administrator(s). The guidelines described herein were developed by the industry without any assumption on who should be the Code Administrator(s).<sup>5</sup>
- 2.8 Administrative assignment of the CO code (NNX/XXX) public resource by an entity does not imply ownership of the resource by the entity performing the administrative function, nor does it imply ownership by the entity to which it is assigned.
- 2.9 Audits of both Code Administrator(s) and code applicants/holders may be performed to: 1) ensure uniformity in application of these guidelines by a Code Administrator to all code requests received by that Code Administrator, 2) ensure consistent application of these guidelines among all Code Administrators in the event there is more than one Code Administrator, 3) ensure compliance with these guidelines by code applicants and Code Administrator(s), and 4) ensure the efficient and effective use of numbering resources by code applicants/holders and management of numbering resources by Code Administrator(s).
- 2.10 An applicant is not required to provide any additional explanation or justification of items that he/she has certified. However, certification alone may not provide the Code Administrator(s) with sufficient information upon which to make a decision regarding code assignment, and additional dialog may follow. The Code Administrator(s) is still obliged to reply within 10 business days.

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<sup>4</sup> Canadian NNX/XXX codes are not currently included in RDBS and hence not shown in the LERG. They are included in BRADS and shown in the TPM, NPA/XXX VHCD and other BRADS outputs.

<sup>5</sup> A list of the current Code Administrator(s) is available upon request from NANPA (See Section 8).

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### 3.0 Assignment Principles

The following assignment principles apply to all aspects of the CO code (NNX/XXX) Guidelines:

- 3.1 Central office codes (NNX/XXX), as part of NANP telephone numbers, are to be assigned only to identify initial destination addresses in the public switched telephone network (PSTN), not addresses within private networks.
- 3.2 Central office codes (NNX/XXX) are a finite resource that should be used in the most effective and efficient manner possible. All applicants for central office codes (NNX/XXX) will be required to provide technical and, for an additional code request, quantitative support for their code requests, to demonstrate that these guidelines are satisfied.
- 3.3 Information that is submitted by applicants in support of code assignment shall be kept to a minimum, shall be uniform for all applicants, and on request shall be treated as proprietary and adequately safeguarded. Information requested for RDBS and BRADS will become available to the public upon input into those systems.
- 3.4 Central office codes shall be assigned in a fair and impartial manner to any applicant that meets the criteria for assignment as detailed in Section 4.0.
- 3.5 Applicants for central office codes must comply with all applicable local governmental, state, federal and World Zone 1 governmental regulations relative to the services they wish to provide.
- 3.6 Any entity that is denied the assignment of one or more central office codes under these guidelines has the right to appeal that decision per Section 10.
- 3.7 Affected parties<sup>6</sup> in a given geographic area have the right and will be given the opportunity to participate as early as possible in the process of determining the alternatives for addressing CO code (NNX/XXX) exhaust and relief in that area before the Code Administrator(s) submits a final recommendation to the relevant regulatory body.

### 4.0 Criteria for the Assignment of Central Office Codes

The assignment criteria in the following sections shall be used by Code Administrator(s) in reviewing a central office code assignment request from a service provider for an initial and/or an additional code:

- 4.1 Assignment of the initial code(s) will be to the extent required to terminate PSTN traffic as authorized or permitted by the appropriate regulatory or governmental authorities, and provided all the criteria in Sections 4.1.1 through 4.1.3 are met. An initial code assignment will be based on identification of a new switching entity, physical point of interconnection

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<sup>6</sup> Affected parties are those entities that have applied for and/or received central office code (NNX/XXX) assignments or reservations within the NPA per Section 4.0 of these Guidelines.

(POI), or unique rate center<sup>7</sup> consistent with regulatory restriction. Utilization criteria or projection will not be used to justify an initial NXX assignment.

- 4.1.1 The applicant must certify a need for NANP numbers, e.g., provision of local or cellular service in the Public Switched Telephone Network.
  - 4.1.2 The applicant must submit an NXX request form certifying that a need exists for an NXX assignment to a point of interconnection or a switching entity due to routing, billing or tariff requirements.
  - 4.1.3 The applicant must be licensed or certified to operate in the area, if required, and must demonstrate that all applicable regulatory authority required to provide the service for which the central office code is required has been obtained.
  - 4.1.4 All information provided on the NXX request form will be considered confidential, with selected information made available publicly only for those fields that must be input to the RDBS and BRADS. The information placed in the RDBS or BRADS becomes public upon assignment of the new code in the appropriate routing data base product.
- 4.2 Assignment of additional code(s) will be made for an established point of interconnection or switching entity by satisfying one of the criteria in Sections 4.2.1 to 4.2.3. By completing the request form, the applicant certifies that their existing resources cannot reasonably meet this requirement.
- 4.2.1 For additional codes for growth, each code holder will certify that existing codes for the switching entity/POI, per service provided by that switching entity or POI, will exhaust within 12 months and will have documented and be prepared to supply as described in this Section, Section 2, and Appendix A (Audits) supporting data in the form of:
    - 1) Telephone Numbers (TNs) Available for Assignment
    - 2) Growth history for 6 months
    - 3) Projected demand for the coming 12 months (See Appendix B).
  - 4.2.2 An additional code(s) is necessary for distinct routing, rating, or billing purposes (e.g., Calling Party Pays).<sup>8</sup>
  - 4.2.3 An additional code(s) is necessary for other reasons. The applicant must provide an explanation of why existing resources assigned to that entity cannot satisfy this requirement.
- 4.3 NNX/NXX code sharing between carriers, in which portions of the NNX/NXX codes are assigned to multiple switching entities/POI's, should be avoided unless mutually agreed to by affected parties.

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<sup>7</sup> Multiple NXX codes, each associated with a different rate center, may be assigned to the same switching entity/POI. Such arrangements may require "Meet Point Billing-like" considerations to permit proper recovery of interconnection charges (see also Section 6.2.3).

<sup>8</sup> Any additional information that can be provided by the code applicant may facilitate the processing of that application.

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When a single switching entity/POI provides access for multiple carriers (i.e., wireless and wireline carriers), and the need for numbers for either carrier is less than a full code (10,000 numbers), the unused numbers from an NNX/NXX code serving one of these carriers can be made available for any carrier served by the switching entity/POI, with the following exception: not more than one cellular carrier should utilize numbers from a single NXX.<sup>9</sup>

- 4.4 Codes shall be assigned on a first-come, first-served basis. Good faith efforts shall be made to eliminate or to minimize the number of reserved codes. Special requirements exist in a jeopardy NPA situation. See Section 7.4 (d). Consideration shall be given by the Code Administrator(s) to code reservation if the applicant can demonstrate the reservation of a code is essential to accommodate technical or planning constraints or pending regulatory approval of a tariff to provide service when the applicant has provided a proposed code use date within twelve months.

Upon written request to the Code Administrator(s), one reservation extension of six months will be granted when the proposed code use date will be missed due to circumstances beyond the control of the applicant (e.g., hardware, software provision delays, regulatory delays, etc.).

No reservation will be made unless the applicant will meet the requirements of code assignment as outlined in Section 4 for initial codes or for additional codes, dependent upon whether the reserved code is to be an initial or additional code.

If a reserved code is not activated within eighteen months, the code will be released from reservation.

When the reservation was due to technical constraints (e.g., Step-by-Step switches) solely, the reservation will be extended until the constraint is no longer present.

- 4.5 A code assignment should not be delayed to an applicant who meets all certification and licensing requirements, if any, when all required tariff filings have been made to provide the service, when approval can be reasonably expected within the established tariff approval timeframe, and when the expected tariff approval date will fall on or before the requested effective date.

## 5.0 CO Code (NNX/NXX) Assignment Functions

The Code Administrator(s) shall:

- 5.1 Provide copies of the central office code assignment guidelines when requested by applicants, including timely notification of changes.
- 5.2 Receive and process applications for CO codes (NNX/NXX) from within the geographic NPA for which the CO Code Administrator(s) is responsible.

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<sup>9</sup> In certain situations there are technical, billing, service delivery, roaming, and/or tariff reasons that require partial and/or different NXX assignments.

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- 5.2.1 Receive NOX Code request and determine if the request is in compliance with code assignment policies and guidelines.
- 5.2.2 Respond within 10 working days from the date of receipt of an application form by completing the response portion that is part of these guidelines.
- 5.2.3 Review the documentation and determine if the code request is in compliance with these code assignment policies and guidelines. In cases where a code application is denied, provide specific reasons for the denial to the applicant in writing and where to make an appeal.
- 5.2.4 Select an unassigned code for assignment.
- 5.2.5 For electro-mechanical switches, perform technical analysis as necessary to determine the appropriate CO code (NNX/NOX) to assign.
- 5.2.6 Perform the notification functions in jeopardy NPA situations. See Section 7.3(a).
- 5.2.7 Maintain records on codes assigned plus those available.
- 5.2.8 Collect and forward to NANPA records of codes assigned for use in the Central Office Code Utilization Survey (COCUS).
- 5.2.9 Ensure, concurrent with assignment of an NOX to a code applicant, that an NPA, NOX, and OCN entry are input to RDBS to indicate that a specific NOX has been assigned to an applicant. This will allow for additional entries into RDBS which may or may not be performed by the Code Administrator.
- 5.3 At the request of the code applicant and if the Code Administrator is the authorized party to input the data, the Code Administrator will input/revise the RDBS and/or BRADS assignment information provided by the applicant on the Central Office Code (NNX/NOX) Assignment Request and Confirmation Forms. Authorization and/or data input responsibilities are determined on an Operating Company Number level. If the Code Administrator does not have the Administrative Operating Company Number (AOCN) responsibility for the data inputs, the code applicant will contact Bellcore-TRA to determine the correct AOCN company and make other arrangements for entering the data into RDBS and BRADS. See Section 1.8 of Part 1 of the request form.
- 5.4 The following functions have an impact on the accurate routing of calls and are especially applicable to both newly assigned numbers and to the reassignment of existing CO codes.
  - 5.4.1 Analyze and help resolve problems related to misrouted calls and calls that cannot be completed. Such trouble investigations should be initiated in the NPA in which the incomplete call originated.
  - 5.4.2 Track switch cutovers and code reassignments, and perform other operational functions; e.g., code reclamation.
  - 5.4.3 Ensure that the code applicant places the code in service within the time frame specified in Sections 6.3.3 and 4.4 of these guidelines. If the assigned code is not

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used within this time frame, the Code Administrator(s) shall request the return of the code for reassignment.

- 5.5 It is recognized that the overall code administration process, e.g., planning for number relief, is related to and will require exchange of information with the CO code (NNX/XXX) assignment process. The additional functions associated with code administration, related to CO codes (NNX/XXX) are described in Section 9.
- 5.6 The Code Administrator may, on occasion, be requested by regulators or through INC recommendations or guidelines to set aside as reserved specific CO codes. If an applicant requests one of the set-aside codes, the Code Administrator will advise the applicant of the reasons the code has been set aside. Should the applicant be unwilling to accept any other available CO code, the Code Administrator shall respond with a Code Administrator's Response/Confirmation marked "Assignment activity suspended by the administrator." The "Explanation" section will state that the code has been set aside and will identify the body that directed the Code Administrator to do so. The applicant may then ask that body to advise the Code Administrator on whether or not to assign the requested set-aside code.

#### 6.0 Responsibilities of Code Applicants and Holders

Entities requesting new CO code (NNX/XXX) assignments as well as entities already assigned CO codes shall comply with the following:

##### 6.1 The Application Process

- 6.1.1 Code applicants for initial and/or additional CO code (NNX/XXX) assignments shall submit their requests to the appropriate Code Administrator(s) using the Central Office Code (NNX/XXX) Assignment Request and Confirmation Form (Code Request Form). One application form is required per NNX/XXX code requested. The code applicant will complete all required entries on the Code Request Form to the best of his/her knowledge as well as sign the Form.

To ensure proper code activation it is also the responsibility of the code applicant to notify the AOCN if the AOCN is different from the Code Administrator. The applicant can get such information by contacting Belcore TRA. (See the Forms, Part 1, Section 1.8)

- 6.1.2 Requests for code assignments should not be made more than 6 months prior to the requested effective date.
- 6.1.3 When requesting "additional" or subsequent code assignments, applicants shall meet the requirements as described in Section 4.2 and conform to the conditions contained therein.
- 6.1.4 The code applicant shall certify on the Code Request Form that to the best of his/her knowledge necessary governmental/regulatory authorization has been obtained to provide the service(s) for which the code is being requested.

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## **6.2 Information Required for Code Activation**

- 6.2.1** Before a CO code (NNX/NXX) can become active, all code holders are responsible for providing the information shown in Part 2 of the Code Request Form that includes routing information for entry into the RDBS and rating information for entry into BRADS. (Note: The LERG contains local routing information obtained from RDBS and reflects the current network configuration and scheduled changes within the PSTN.)
- 6.2.2** Because of the current standard 90-day industry interval for NNX/NXX code activation,<sup>10</sup> plus additional time required for code request processing, applicants should request "effective dates" at least 15 weeks (111 calendar days) after the date of receipt of the code request. Expedited requests (activation in less than 15 weeks) may increase the potential for call blocking and/or billing errors.
- 6.2.3** Each switching center, each rate center and each POI may have unique V&H coordinates
- 6.2.4** A code applicant or holder who has issued or is planning to issue credit or calling cards will be responsible for entering CO code (NNX/NXX) information into the appropriate LIDB Access Support System (LASS).

## **6.3 Ongoing Administration**

### **6.3.1 Information Changes**

The information associated with a code assignment may change over time. Such changes may occur, for example, because of the transfer of a code -- through merger or acquisition -- to a different company. These changes may include not only a change in company name, but also a change in the location to which calls made with a given NXX are to be routed. Accordingly, the Code Administrator(s) must be informed of these changes to ensure that an accurate record of the entity responsible for the code and the data associated with the code is maintained.

It is the responsibility of the code holder to arrange for the entry of any changes to RDBS and BRADS data associated with a switching entity/POI including, but not limited to, Office Functionality and Switching Entry-Network Services through the Code Administrator, or the company with (AOCN) authorization.

### **6.3.2 Responsibilities of the Code Holder**

The holder of a CO code (NNX/NXX) assigned by the Code Administrator(s) or acquired by other means such as transfer (i.e., by merger or acquisition) must use the code consistent with these guidelines. Most importantly, the new code holder must participate in the audit process (See Appendix A) necessary to effectively assess code utilization.

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<sup>10</sup> For more information, refer to ICCF document 92-0726-004, "Recommended Notification Procedures to Industry for Changes in Access Network Architecture."

### 6.3.3 Code Use

Code assignments are made subject to the conditions listed in Section 4. A code assigned to an entry, either directly by the Code Administrator(s) or through transfer from another entry, should be placed in service within 6 months after the initially published effective date. Certification of in service will be required (see Central Office Code (NNX/NXX) Assignment Request and Confirmation Form - Part 4). If the assignee no longer has need for the code, the code should be returned to the Code Administrator(s) for reassignment. If it is determined through the audit process or other means that a code is not in use after 6 months as noted above, the Code Administrator(s) will request the return of the code.

### 6.4 NPA Planning Information

6.4.1 All code holders shall provide forecasted code requirements to the Code Administrator(s) to be used solely for projecting NPA exhaust and for planning NPA code relief. All such forecasts shall be treated on a proprietary basis.

6.4.2 Information furnished by code holders shall be submitted on the form provided in Appendix C. This data will be aggregated and submitted by the Code Administrator(s) to NANPA for use in the annual COCUS studies.

### 7.0 Central Office Code Conservation

Assignment of World Zone 1 numbering resources is undertaken with the following objectives: to efficiently and effectively administer/manage a limited NANP resource through code conservation, to delay NPA exhaust and the need for NPA relief (e.g., splits/overlays) for as long as possible and to delay the eventual exhaust of the NANP (see Section 3.2). The timelines included in Appendix D are provided for illustrative purposes only. However, the "NPA Relief" and the "RDBS Update" dates are the only dates currently recognized as industry standards. In meeting these objectives the following are conservation measures to be taken by Code Administrator(s).

- 7.1 Annual COCUS studies will be conducted utilizing projected demand forecasts, provided by code holders (see Section 6.4), to identify NPAs nearing exhaust. The schedule for projected exhaust will be forwarded by NANPA to the appropriate Code Administrator(s) and published in summary format for industry use.<sup>11</sup>
- 7.2 Ongoing code administration practices which foster conservation shall include the following: (See Section 7.3 for jeopardy NPA situations.)
  - (a) Make code applicants aware of the options and potential benefits of sharing NNX/NXX codes, consistent with Section 4.3 above.
  - (b) Use of CO codes (NNX/NXX) for purposes other than assignment (e.g., test codes) should be minimized.
  - (c) Codes that may result in dialing confusion (e.g., HNPAs, adjacent NPAs used as CO codes) may be preferable for assignments other than to end users (i.e., test

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<sup>11</sup> NANPA will be responsible for disseminating COCUS results to the affected parties.

codes). Nonetheless, applicants requesting one of these codes are not precluded from receiving it, if unassigned and technically feasible.

- (d) Implementation of code protection arrangements should be avoided where practical. When approaching the exhaust of an NPA, retention of protected codes should be re-examined. Code protection is an arrangement where a central office code assigned in one NPA is not assigned in an adjacent NPA, thereby becoming protected to allow 7-digit dialing across the common boundary.
- (e) Examination of the continued use of codes from the HNPA to serve customers in an adjacent NPA should be undertaken when the HNPA is nearing exhaust. Continued use should be eliminated where practical.

7.3 When it is determined by the Code Administrator(s) that an NPA is in jeopardy,<sup>12</sup> based on COCUS results and projected demand forecasts, the following actions will be taken to provide relief in the jeopardy NPA.

- (a) The Code Administrator(s) will notify the appropriate regulatory authority(ies) that the NPA is in jeopardy and that special conservation procedures will be invoked. If appropriate, the Code Administrator(s) will obtain the approval of the regulatory authority(ies) for the implementation of the special conservation provisions.
- (b) The Code Administrator(s) will notify the NANPA and affected parties of the established code relief date and the special conservation procedures documented in Section 7.4 will be invoked immediately. Affected parties including the local regulators within the jeopardy NPA will be invited to attend a meeting convened by the Code Administrator for an explanation of the special conservation procedures that will be in effect until code relief is implemented and initiate discussion of extraordinary NPA-specific conservation procedures. If and when extraordinary procedures are required in addition to 7.4, the Code Administrator(s) will notify affected parties (See Section 7.5). (Note: Affected parties are those entities that have applied for and/or received central office code (NNX/XXX) assignments or reservations within the jeopardy NPA per Section 4.0 of these guidelines.)
- (c) NANPA will notify the industry of the NPA in jeopardy via an Information Letter (IL) which will include the code relief date.

7.4 The following are special conservation procedures that will be invoked in the situation of a jeopardy NPA.

- (a) During the special conservation period, the Code Administrator will treat all code requests in a fair and impartial manner, consistent with the special conservation provisions.
- (b) Upon receipt of the notice of the jeopardy situation from the Code Administrator, each code holder will review their forecast and demand data and provide the

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<sup>12</sup> A jeopardy NPA condition exists when the forecasted and/or actual demand for NXX resources will exceed the known supply during the planning/implementation interval for relief. Accordingly, pending exhaust of NXX resources within an NPA does not represent a jeopardy condition if NPA relief has been or can be planned and the additional NXXs associated with the new NPA will satisfy the need for new NXX(s) codes.

information to the Code Administrator within 30 days using the 'Jeopardy COCUS' form (Appendix E).

Any changes to information re: projected code use requirements during the special conservation period will be submitted to the Code Administrator as they occur

- (c) For additional codes for growth, each code holder will certify that existing codes for the switching entry/POI, per service provided by that switching entry or POI, will exhaust within 6 months and will have documented and be prepared to supply as described in Section 4.2, Section 2, and Appendix A (Audits) supporting data in the form of:

- 1) TNs Available for Assignment
- 2) Growth history for 6 months
- 3) Projected demand for the coming 6 months (See Appendix B).

- (d) For codes reserved per Section 4.4:

- 1) Holders of reserved codes will be asked to voluntarily return their codes or confirm their planned reservation dates.
- 2) Reservations with planned activation dates beyond the "NPA relief date" will be reviewed, with resources made available as a result of NPA relief.
- 3) Reservations with planned activation dates prior to the "NPA relief date" will not be honored if doing so would preclude the assignment of a code resource for which a certified request has been processed.
- 4) In this situation, reservations with the latest planned activation date will be the first codes to be released for assignment, and the reservation will be canceled.

- (e) Requests for assignment of new codes for other than growth or to serve a new switching entry/POI should be minimized. However, after joint discussion between the Code Administrator and the code applicant, a special purpose code assignment may be appropriate. The decision to postpone or withdraw a code request is the code applicant's and must be confirmed in writing to the Code Administrator.

- (f) In a jeopardy NPA situation, increased code sharing should be considered, subject to Section 4.3.

- (g) During the jeopardy period, planning for extraordinary NPA-specific conservation procedures shall commence (Reference Section 7.5).

**7.5 Unique circumstances within a given jeopardy NPA may require extraordinary NPA-specific conservation procedures. In this event, the following activities shall apply.**

- (a) The Code Administrator shall develop NPA-specific conservation procedures in conjunction with the affected parties in the jeopardy NPA (See Appendix F). The Code Administrator will work with the affected parties to continually refine the NPA-specific conservation procedures, as necessary, until NPA relief. The Code Administrator will notify the applicable regulatory authority(ies) of the NPA-specific procedures and, if appropriate, obtain approval for the procedures.

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- (b) If good faith efforts to reach agreements have failed, the Code Administrator shall draft and submit a proposed recommendation to the regulatory authority(ies) for approval. This does not preclude any other interested party from submitting an alternate recommendation.
- (c) The Code Administrator will monitor changes in the jeopardy situation using the jeopardy COCUS form (J-COCUS, Appendix E). Based upon the results of (a) and using the J-COCUS information, the Code Administrator will implement each NPA-specific conservation procedure as required.
- (d) The Code Administrator will notify the affected parties and applicable regulatory authorities of the implementation of the NPA-specific conservation procedure(s) as they occur.
- (e) The Code Administrator will notify NANPA of the NPA-specific conservation procedures to be implemented. The NANPA will document any new conservation procedures developed along with their results in an Information Letter (IL) for future reference.

7.6 The special and/or extraordinary NPA-specific conservation procedures shall remain in effect, if required, until NPA relief has been implemented.

#### 8.0 Maintenance of These Guidelines

It may be necessary to modify the guidelines periodically to meet changing and unforeseen circumstances. Questions regarding the maintenance of the guidelines may be directed to:

Director - NANP Administration  
290 W. Mt. Pleasant Avenue  
Room 1B-233  
Livingston, NJ 07039  
201-740-4645  
201-740-6860 FAX

Requests for changes to these guidelines should be directed to the appropriate industry forum, currently the INC.

#### 9.0 Responsibilities for Code Relief Planning

This section identifies required code relief planning functions that are related to the CO code (NNX/NXX) assignment functions as specified in these guidelines. These functions are identified because they are currently performed in conjunction with code assignment. An objective of this function is to promote effective and efficient code utilization and thereby help ensure the adequate supply of CO codes (NNX/NXX).

The Code Administrator(s) shall be required to provide assistance in the code relief planning process when and if necessary. The output of the planning process shall be made available to code holders, applicants and the industry by whatever means is appropriate.

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Relief planning functions included in this section are as follows:

- 9.1 Tracks CO code (NNX/NOX) assignments within NPAs to ensure effective and efficient utilization of numbering resources.
- 9.2 Works with the Code Administrator(s) to prepare the annual CO Code Utilization Survey (COCUS) input as described in these guidelines and forwards the information to NANPA. (See Sections 5.2.8 and 7.1) This function includes the following activities:
  - 9.2.1 Issues requests for, collects and compiles available information related to CO code (NNX/NOX) utilization and relief planning forecasts.
  - 9.2.2 Investigates and resolves, wherever possible, any discrepancies in the information provided.
  - 9.2.3 Any information released to NANPA or to the industry would be released only on an aggregated or summary basis. (See Section 7.1)
- 9.3 Projects CO code (NNX/NOX) exhaust within NPAs in order to prepare for NPA relief activity.
- 9.4 Develops plans for NPA relief and initiates implementation efforts, in both normal and jeopardy situations (Refer to Section 7.3). When the need for code relief is identified and relief activity is initiated, advises all parties affected by NPA relief activities and includes them in the planning effort.<sup>13</sup>
- 9.5 Collects, compiles and forwards the necessary information to NANPA for the purpose of obtaining an NPA assignment when it is determined that a new NPA code is required to accommodate relief.
- 9.6 Obtains endorsement of NPA relief plan from appropriate regulatory authority(ies), where necessary.
- 9.7 Develops dialing plan alternatives within local jurisdictions.
- 9.8 Provides assistance to users of numbering resources and suggests alternatives, when possible, that will optimize numbering resource utilization.
- 9.9 Prepares and issues information related to reports for special information requests and scheduled periodic reports that relate to utilization of numbering resources.
- 10.0 Appeals Process

Disagreements may arise between the Code Administrator(s) and code holders/applicants in the context of the administration of these guidelines. In all cases, the Code Administrator(s) and code holders/applicants will make reasonable, good faith efforts to resolve such disagreements among

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<sup>13</sup> A document, "Industry Notification of NPA Relief Activity Guidelines" (ICCF 92-1127-006), dated November 30, 1992, addresses the notification process after it has been decided that NPA relief is needed and when that relief must take place.

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themselves consistent with the guidelines prior to pursuing any appeal. Appeals may include but are not limited to one or more of the following options:

- The code holder/applicant will have the opportunity to resubmit the matter to the administrator(s) for reconsideration with or without additional input.
- Guidelines interpretation/clarification questions may be referred to the body responsible for maintenance of the guidelines. Unless otherwise mutually agreed to by the parties, these questions will be submitted in a generic manner protecting the identity of the appellant.
- The Code Administrator(s) and code holders/applicant may pursue the disagreement with the appropriate governmental/regulatory body.

Requests for modification of the guidelines can be pursued as described in Section 8 of the guidelines.

Reports on any resolution resulting from the above options, the content of which will be mutually agreed upon by the involved parties, will be forwarded to the body responsible for the maintenance of the guidelines. At minimum the report will contain the final disposition of the appeal, e.g., whether or not a code was assigned.

## 11. Glossary

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| Active Code                                 | A code formally assigned by the Code Administrator(s) and implemented in the PSTN for specific routing or rating requirements.   |
| Additional NXX Code Assignment for Growth   | A code assigned to a switching entry or point of interconnection subsequent to the assignment of the first code (See: Initial Code), for the same purpose as a code that was previously assigned to the same switching entry or point of interconnection. A "Growth Code" is requested when the line numbers available for assignment in a previously assigned NNX/XXX code will not meet expected demand. |
| Additional NXX Code for New Purpose         | A code assigned to a switching entry or point of interconnection subsequent to the assignment of the first code (See: Initial Code), due to a technical, billing, routing requirement that is different from the use of any code(s) that were previously assigned to the same switching entry or point of interconnection.   |
| Authorized Representative of Code Applicant | The person from the applicant's organization or its agent that has the legal authority to take action on behalf of the applicant.  |
| BRADS                                       | Bellecore Rating Administrative Data System is a data base system that contains North American Numbering Plan (NANP) rating data including Canada and the Caribbean and, while not part of the NANP, also includes Mexico due to its proximity. This System generates the Terminating Point Master for billing purposes.   |

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| <b>BRIDS</b>                     | The Bellcore Rating Input Database System (BRIDS) is a replacement database for BRADS. For purposes of the guidelines, the terms BRADS and BRIDS may be considered synonymous.  |
| <b>Central Office Code</b>       | The sub-NPA code in a telephone number, i.e., digits D-E-F of a 10-digit World Zone 1 address. Central office codes are in the form "NNX" or "NXX", where N is a number from 2 to 9 and X is a number from 0 to 9. Central office codes may also be referred to as "NNX codes", "NXX codes", or "NNX/NXX codes".  |
| <b>CLLI®</b>                     | Common Language Location Identifier® is an eleven-character descriptor of a switch and is used for routing calls.   |
| <b>CO Code (NNX/NXX) Exhaust</b> | A point in time at which the quantity of TN's within existing CO codes (NNX/NXX) which are "Available for Assignment" equals zero within a switching entity/POI or, conversely, when the quantities of "Working Telephone Numbers" plus "TN's Unavailable for Assignment" equal 10,000 times the quantity of existing CO codes (NNX/NXX) assigned to a switching entity/POI. Where CO code sharing occurs or partial CO codes are assigned to a switching entity/POI, the latter number should be adjusted accordingly.   |
| <b>Certify</b>                   | <p>(When used by the applicant): As part of the Central Office Code (NNX/NXX) Assignment request, to confirm, through a formal statement signed by the code applicant or an authorized representative, that the information contained within the assignment request is true, accurate, and complete to the best of his/her knowledge.</p> <p>(When used by the regulator): Where applicable, to authorize, in writing, an entry to provide a telecommunications service in the relevant geographic area. Such authorization is the responsibility of the appropriate regulatory agency.</p> |
| <b>COCUS</b>                     | Central Office Code Utilization Survey (COCUS) is conducted annually by NANPA from direct input received from Central Office Code Administrator(s) in order to monitor central office code utilization, projected exhaust of NPAs and demand for new NPAs to provide code relief. The purpose of COCUS is to provide an annual overall view of both present and projected CO code (NNX/NXX) utilization for each NPA in the NANP.   |
| <b>Code Administrator</b>        | Entry(ies) responsible for the administration of the NXXs within an NPA.  |
| <b>Code Holder</b>               | The entry to whom a CO code (NNX/NXX) has been assigned for use at a Switching Entry or Point of Interconnection it owns or controls.   |

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| Code Protection      | Code protection is an arrangement where a central office code assigned in one NPA is not assigned in an adjacent NPA, thereby becoming projected to allow 7-digit dialing across the common boundary.   |
| Conservation         | Consideration given to the efficient and effective use of a finite numbering resource in order to minimize the cost and need to expand its availability, while at the same time allowing the maximum flexibility in the introduction of new services, capabilities and features.  |
| Effective Date       | The date by which routing and rating changes within the PSTN must be complete for the assigned code. Also, the date by which the code becomes an active code.   |
| INC                  | Industry Numbering Committee, a standing committee of the Industry Carriers Compatibility Forum (ICCF) that provides an open forum to address and resolve industry-wide issues associated with the planning, administration, allocation, assignment and use of numbering resources and related dialing considerations for public telecommunications within the North American Numbering Plan (NANP) area.         |
| Initial Code         | The first geographic NXX code assigned at a unique switching entry or point of interconnection.   |
| In Service           | An active code in which specific subscribers or services are utilizing assigned telephone numbers.  |
| Interchangeable NPAs | Refers to an industry plan to expand substantially the supply of Numbering Plan Area codes (NPAs) in January 1995, by removing the restriction that the second digit of the NPA must be a 0 or 1.   |
| Jeopardy NPA         | A jeopardy condition exists when the forecasted and/or actual demand for NXX resources will exceed the known supply during the planning/implementation interval for relief. Accordingly, pending exhaust of NXX resources within an NPA does not represent a jeopardy condition if NPA relief has been or can be planned and the additional NXXs associated with the NPA will satisfy the need for new NXX codes. |
| LATA                 | Local Access and Transport Area, also referred to as service areas by some BOCs, and serve two basic purposes: to provide a method for delineating the area within which the BOCs may offer services and, to provide a basis for determining how the assets of the former Bell System were to be divided between the BOCs and AT&T at divestiture.  |

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| LERG                        | Local Exchange Routing Guide: contains information about the local routing data obtained from the Routing Data Base System (RDBS). This information reflects the current network configuration and scheduled network changes for all entities originating or terminating PSTN calls with the NANP excluding Canada.  |
| Major Vertical Coordinate   | A five-digit number used with the Vertical Coordinates and Horizontal Coordinates to pinpoint the location of a rate center. The Vertical and Horizontal Coordinates can be used to calculate mileage measurements between two rate centers that is used to determine the appropriate mileage rates in determining the charge for message telephone service calls.                             |
| Major Horizontal Coordinate | A five-digit number used with the Vertical Coordinates and Horizontal Coordinates to pinpoint the location of a rate center. The Vertical and Horizontal Coordinates can be used to calculate mileage measurements between two rate centers that is used to determine the appropriate mileage rates in determining the charge for message telephone service calls.                             |
| Minor Vertical Coordinate   | A five-digit number used with the Vertical Coordinates and Horizontal Coordinates to pinpoint a more specific location. The Minor Vertical and Horizontal Coordinates can be used to divide rate centers into zones for more specific distance calculations. Most often used to rate interstate messages when straight distance between the calling and called point is less than forty miles. |
| Minor Horizontal Coordinate | A five-digit number used with the Vertical Coordinates and Horizontal Coordinates to pinpoint a more specific location. The Minor Vertical and Horizontal Coordinates can be used to divide rate centers into zones for more specific distance calculations. Most often used to rate interstate messages when straight distance between the calling and called point is less than forty miles. |
| Months to Exhaust           | $= \frac{\text{TNs Available for Assignment}}{\text{Growth (Quantity of Lines added per Month)}}$  |
| NANP                        | The North American Numbering Plan is a numbering architecture in which every station in World Zone 1 is identified by a unique ten-digit address consisting of a three-digit NPA code, a three digit central office code of the form NNX/NXX, and a four-digit line number of the form XXXX.   |
| NANPA                       | North American Numbering Plan Administration. With divestiture, key responsibilities for coordination and administration of the North American Numbering/Dialing Plans were assigned to NANPA. These central administration functions are exercised in an impartial manner toward all industry segments while balancing the utilization of a limited resource.                                 |

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| NPA                            | <p>Numbering Plan Area, also called area code. An NPA is the 3-digit code that occupies the A, B, and C positions in the 10-digit NANP format that applies throughout World Zone 1. NPAs are of the form N01X, where N represents the digits 2-9 and X represents any digit 0-9. After 1/1/95, NPAs will be of the form NXX. In the NANP, NPAs are classified as either geographic or non-geographic.</p> <ul style="list-style-type: none"><li>a) <u>Geographic NPAs</u> are NPAs which correspond to discrete geographic areas within World Zone 1.</li><li>b) <u>Non-geographic NPAs</u> are NPAs that do not correspond to discrete geographic areas, but which are instead assigned for services with attributes, functionalities, or requirements that transcend specific geographic boundaries. The common examples are NPAs in the N00 format, e.g., 800.</li></ul> |
| NPA Code Relief                | <p>NPA code relief refers to an activity that must be performed when an NPA nears exhaust of its 640 NNX or the 792 NXX capacity. Relief is typically provided to an NPA about a year before its capacity is reached. NPA Code relief for an NPA that is nearing the 640 NNX limit is usually provided in the form of implementing interchangeable central office code (ICOC) which provides an additional 152 assignable central office codes. An NPA that has been implemented as ICOC has a capacity of 792 assignable NXX central office codes. Providing code relief to such an NPA normally takes the form of assigning a new NPA for an NPA split or overlay. Another option is changing the boundary of the existing NPA.</p>   |
| NPA Relief Date                | <p>The date by which the NPA is introduced and routing of normal commercial traffic begins.</p>   |
| OCN                            | <p>Operating Company Number (OCN) is a term for a four character code used to associate a company with certain records in Bellcore's RDBS and BRIDS databases, and in related output (e.g., LERG, V&amp;H Coordinates Data). Specific to these guidelines, OCN is intended to identify the company assigned a CO Code. Numeric OCNs are assigned by the National Exchange Carrier Association (NECA), and are referred to by NECA as Company Codes. Since some companies may be associated with multiple OCNs, to support consistency in RDBS, BRIDS, and related output, Bellcore's TRA organization should be contacted first if there is a question about what OCN to use (see Part 1, Footnote 2).</p>  |
| Point of Interconnection (POI) | <p>The physical location where a carrier's connecting circuits interconnect for the purpose of interchanging traffic on the PSTN.</p>   |